

**\*NASA Declassification/Release Instructions on File\***

PROTOCOL

FOR THE ESTABLISHMENT OF A SPECIAL DIRECT COMMUNICATIONS LINK BETWEEN THE WORLD METEOROLOGICAL CENTERS IN MOSCOW AND WASHINGTON IN ACCORDANCE WITH THE BILATERAL AGREEMENT ON OUTER SPACE DATED JUNE 8, 1962 BETWEEN THE ACADEMY OF SCIENCES OF THE USSR AND THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION OF THE USA.

1. This Protocol has been prepared to implement the Bilateral Agreement in Outer Space, dated June 8, 1962, between the Academy of Sciences of the USSR and the National Aeronautics and Space Administration in the USA, as well as the First Memorandum of Understanding dated March 20 and May 24, 1963.

2. In anticipation of the availability of meteorological satellite data for exchange by early 1965, it is agreed to establish, in the third quarter of 1964, a duplex twenty four hour communications link between Moscow and Washington, for transmission of meteorological information. Assuming there are no technical difficulties of any kind, it is agreed that each side will use its own terminal equipment and apparatus and that the telegraph signals will be sent in accordance with International Telegraph Code 2. The communications link and the terminal equipment and apparatus will conform to CCITT standards, and will be operated according to an agreed schedule of transmission of photo, facsimile, and telegraph signals.

3. It was agreed that the link would be routed via the following points -- Moscow-Warsaw-Berlin-Frankfurt-London-Washington.

4. The principle of equal sharing of costs will be achieved through a method of settlement whereby the USSR and the USA will pay full costs

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of the communications link between Washington and Moscow for periods of one month. The USA will pay for the first month after establishment of the link after which the responsibility for payment of costs will be assumed by the parties alternately for each one month period.

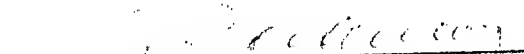
5. After the link has been determined to be operating satisfactorily, the parties, in a manner to be determined by correspondence, will invite to a meeting the WMO, weather services operating in the territories through which the communications link passes, and any other weather services interested in acquiring access to the communications link on a receive-only basis. Each such weather service will make a proportional contribution to the total expenses of the communication link.

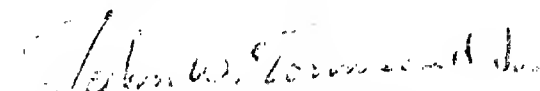
6. This special Protocol may be terminated by either party on 60 days notice.

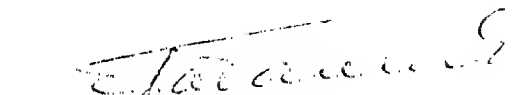
FOR NASA:

FOR THE ACADEMY OF SCIENCES OF THE USSR:

  
\_\_\_\_\_  
Hugh L. Dryden

  
\_\_\_\_\_  
A. Blagonravov

  
\_\_\_\_\_  
John W. Townsend

  
\_\_\_\_\_  
A. Badalov

Geneva, Switzerland,  
June 6, 1964.

SECOND MEMORANDUM OF UNDERSTANDING  
TO IMPLEMENT THE BILATERAL SPACE  
AGREEMENT  
OF JUNE 8, 1962  
BETWEEN THE ACADEMY OF SCIENCES  
OF THE USSR AND  
THE NATIONAL AERONAUTICS AND SPACE  
ADMINISTRATION OF THE US

I - PREAMBLE

The purpose of the present Memorandum of Understanding is to (1) advance the implementation of the sections of the bilateral space agreement of June 8, 1962 dealing with a coordinated meteorological satellite program and a world magnetic survey using satellites; and (2) to provide for new cooperation in the preparation of a major review and projection of work of the two countries in space biology and medicine.

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This section of the Second Memorandum of Understanding to Implement the Bilateral Space Agreement of June 8, 1962 supplements Section II of the First Memorandum, dated March 20 and May 24, 1963, and replaced the Appendix attached to that Memorandum.

A. EXCHANGE OF CONVENTIONAL METEOROLOGICAL DATA

1. Conventional data of equivalent type will be exchanged over the communications link between the World Meteorological Centers in Moscow and in Washington, provisions for the establishment of which have been determined by a separate protocol in accordance with transmission schedules to be agreed by exchange of correspondence between the Chief, U.S. Weather Bureau, and the Chief of the Hydro-meteorological Service of the USSR.

- (a) Collectives of upper-air data. Transmissions should be completed within four hours of observation time.
- (b) Collectives of surface synoptic weather reports. Data available in Washington, within three hours of observation time, for the area of North and Central America and the North Atlantic and North Pacific Oceans, will be transmitted to Moscow. Data available in Moscow, within three hours of observation time, for the areas of Eastern Europe, the USSR, South Asia and the Southern Pacific (WMO Regional Association V), will be transmitted to Washington.
- (c) in addition, the following charts will be transmitted by facsimile on a time available basis:
  - (1) Forecast contour charts for 1,000, 500, 300 and 200 millibars, for periods up to 72 hours, if available.

- (ii) Vertical motion forecast for a level between 850 and 500 mb, or for the levels 850, 700 and 500 mb.
- (iii) 500 mb. vorticity chart.
- (iv) Sea level isobaric five-day forecast.
- (v) Thirty-day temperature and precipitation forecast for the continent of the transmitting country.
- (vi) Special charts for aviation such as tropopause chart and significant weather distribution chart.

3. When practicable, charts exchanged will cover the area of the Northern Hemisphere. Polar stereographic projections will be used for all chart exchanges. Analysis and prognostic charts having a scale of 1:30 million or 1:40 million will be used. Special charts exchanged on request would be on scales most convenient for the transmitting country.

4. When satellite data becomes available, it will have first priority as provided in the First Memorandum of Understanding. Priorities for conventional data will follow thereafter in the order prescribed above. It is recognized that, due to the experimental nature of satellite programs, there may be periods when satellite data will not be available at Moscow or Washington and satellite data exchange will be temporarily discontinued.

5. Status of the exchange will be reviewed formally early in 1965, and at six-month intervals thereafter, to ascertain whether the purpose of satellite data exchange has been achieved and to evaluate the usefulness of continued direct exchange. If satellite data does not become mutually available within a reasonable time, the exchange of data over this special link will be discontinued.

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III - MAGNETIC FIELD SURVEY THROUGH THE USE OF ARTIFICIAL SATELLITES

A. EXCHANGE OF DATA

1. It is agreed that the exchange of magnetic observatory data between the Academy of Sciences of the USSR and NASA of the USA, provided for as described in IV, paragraph 6, of the First Memorandum of Understanding (Geneva, 1963) is to be conducted in the volume of data for the years 1964 and 1965, and will be carried out through World Data Centers A and B, located, respectively, in Washington and in Moscow.

2. It is agreed that magnetograms and monthly tables of the following Observatories

<u>USSR</u>	<u>USA</u>
Yakutsk	Sitka
Sverdlovsk	College
Irkutsk	Fredericksburg
Odessa	Tucson
Tashkent	San Juan
	Guam

for the years 1960-1963 will be transmitted to World Data Centers A and B before the end of 1964.

3. It is agreed that the exchange of magnetic survey data taken without the utilization of satellites, provided for in IV, paragraph 8, of the First Memorandum of Understanding (Geneva, 1963) will be conducted through World Data Centers A and B, located, respectively, in Washington and in Moscow.

B. MAGNETIC MAPPING

1. It is agreed to review the possibility of utilizing satellite measurement results for the composition of a magnetic map for days of slight disturbance and to exchange review results with the other side.

#### IV. SPACE BIOLOGY AND MEDICINE

Discussions concerning the areas of mutual interest in Space Biology and Medicine have resulted in the recognition of the desirability of cooperation in this field and have produced the following agreement:

1. To proceed with the publication of a two or three volume work to contain a review of the fundamental achievements and problems of space biology and medicine over the past 10 years, including aspects of future development in this field, and to regard this work as a first step toward further cooperation.

2. By means of correspondence between the Academy of Sciences of the USSR and NASA of the US to establish an Editorial Board co-chaired by a Soviet and a U.S. scientist, with equal representation of the two ~~countries~~ <sup>parties</sup>, and with the following responsibilities:

- (a) To agree on suitable titles for the entire work as well as for the separate volumes.
- (b) To agree on the title of each chapter and to develop an outline of the contents of each chapter. A tentative outline of the work for the Board's consideration is appended.
- (c) The Editorial Board will offer COSPAR an opportunity to forward any comments COSPAR might wish to make on the proposed table of contents within an agreed period of time.
- (d) The U.S. representative<sup>S</sup> on the Editorial Board will select the U.S. authors; the Soviet representatives will select the Soviet authors. Each chapter will appear in the final

volumes in two parts, one emphasizing Soviet work in the field and prepared by the Soviet author, the other emphasizing U.S. work and prepared by the U.S. author..

- (e) Arrange for a system of correspondence and for scientific and editorial review of the manuscripts.
  - (f) Provide for an agreed system of writing the contents and for the sequence of placing the articles.
  - (g) In exceptional cases, which shall require the unanimous consent of the editorial board before any invitations are directed to any authors, a combining of the articles of two authors into a single article may be effected, or a single author commissioned to write a given chapter.
3. The publication plan will be as follows:
- (a) Each volume of the series will appear both in English and Russian. The English language version will be published *by the American side* ~~in the United States~~, the Russian version *by the Soviet side* ~~in the USSR~~.
  - (b) Each side will prepare translations of the material supplied by the other into its own language and each translation will be reviewed and edited by the side of origin before publication.
  - (c) The costs of work performed within each country including costs of translations, editing and travel of its nationals will be borne by the respective country.
  - (d) The time schedule will be:

1 October 1964	- Establishment of the Editorial Board.
1 December 1964	- Final Plan of contents and identification of and instructions to authors.

- 1 July 1965      - Deadline for manuscripts.
- 1966-1967      - Publication of all volumes.

4. After receipt of the manuscripts of all materials, during the fourth quarter 1965 - first quarter 1966, - discussions between the two parties (Academy of Sciences of the USSR and NASA of the USA) will be held on the state of the problem and the work conducted in the two countries, and a determination will be made of possible forms of further cooperation of the two countries in the field of space biology and medicine including a common program of joint research.

5. The parties agree that they will continue their normal participation in the meetings and other work of the international scientific organizations in this field.

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The recommendations proposed in the present document have a preliminary character and will be presented by both parties to the Academy of Sciences of the USSR and the National Aeronautics and Space Administration of the US for final consideration. If either of the two parties finds it necessary to make any corrections, additions, or deletions in the text of the prepared documents, then all of these changes shall be forwarded within one month of this date, by correspondence, which will be sent to the following address in Moscow:

Academy of Sciences of the USSR,  
Leninski Prospekt 14,  
Moscow, USSR.


and to the following address in Washington:


National Aeronautics and Space Administration,  
Attention: Dr. Hugh L. Dryden,  
400 Maryland Avenue, S.W.,  
Washington 25, D.C.,  
U.S.A.

If in this final consideration there is failure to agree on any of the major areas, the recommendations in the other major areas will continue in effect.

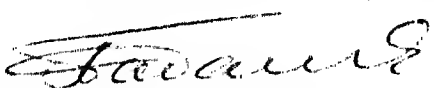
FOR NASA:

FOR THE ACADEMY OF SCIENCES OF THE USSR:

  
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A. Badalov

Geneva, Switzerland,  
June 6, 1964.

CONTENTS OF "THE FOUNDATIONS OF SPACE BIOLOGY AND MEDICINE"  
(Review of Fundamental Problems, Achievements, and Prospects for Development)

VOL. I

PART I

INTRODUCTION

Fundamental problems, general significance, and probable lines of development of work in space biology.

PART II

OUTER SPACE FROM A PHYSICAL AND BIOLOGICAL POINT OF VIEW

CHAPTER 1. Physical properties of the cosmic environment (outer space), which are important from a biological point of view.

CHAPTER 2. Planets and satellites of the solar system from a physical and ecological point of view.

CHAPTER 3. Biological action of environmental extremes (simulated under laboratory conditions).

CHAPTER 4. Exobiology. The search for and study of extra-terrestrial forms of life.

CHAPTER 5. Methods of exobiological research.

CHAPTER 6. Methods of sterilization and prevention of uncontrolled transfer of forms of life.

VOL. II

PART III

MEDICAL AND BIOLOGICAL PROBLEMS OF MAN'S FLIGHT INTO SPACE

CHAPTER 1. Environmental conditions during space flight. Programs and prospects for research.

CHAPTER 2. Radiation safety during space flight.

CHAPTER 3. Foundations of gravitational biology.

CHAPTER 4. Accelerative forces during space flight.

CHAPTER 5. Weightlessness and artificial  
gravitation.

CHAPTER 6. Psycho-physiological problems during  
prolonged space flights.

VOL. III      PART IV

SYSTEMS FOR PROTECTING AND SUPPORTING MAN IN SPACE  
FLIGHT

CHAPTER 1. General principles for the construction  
of protective systems for man.

CHAPTER 2. Closed life support systems for man.

CHAPTER 3. Work physiology and ability to work  
in space flight.

CHAPTER 4. Biological indices for manned space  
flight trajectories. Review of flight experiment  
results with animals and other organisms.

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Approved For Release 2001/08/28 : CIA-RDP67B00558R000100100008-1

**MEMORANDUM FOR: Deputy Director (Science & Technology)**  
**ATTENTION:** [REDACTED] 25X1A  
**SUBJECT: US-USSR Biomedical Space Agreement**

As per your telecon request of 26 June 1964, attached please find the position support paper on the proposed US-USSR cooperative program in Space Biology and Medicine.

25X1A

[REDACTED]  
Assistant Director  
Scientific Intelligence

**Attachment:**  
Memo for Record  
by DC/LSD/SI  
dated 6/29/64

**Distribution:**  
Orig & 1 - Addressee  
2 - AD/SI  
✓ 3 - LSD/SI

**OSI/LSD: [REDACTED]:lrj/7513 (29 Jun 64)**

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NO FOREIGN DISSEM

20 June 1964

MEMORANDUM FOR THE RECORD

SUBJECT: US-USSR Cooperation in Space Biology  
and Medicine

1. In principle the proposed agreement would be advantageous to both sides and represents a first step towards expanded cooperation in a mutually beneficial area. However, certain precautionary measures are indicated with regard to the initial stage of co-authored publication. Various critical problems also will arise in the second stage of cooperative research and development.

2. Co-authored Publication

As outlined in Section IV of the COSPAR agreement, a variety of critical problem areas are to be covered which are of concern to both sides. Several areas represent a paucity of available hard data due to inherently difficult experimental conditions, and others are concerned with subjects on which information is speculation or philosophical in character. On balance, the net return of new information to the United States probably will be small, if matched against the open literature now available. Volume I, Part I (Introduction) represents a coincidence of general thinking among investigators of all nations as revealed in previous international meetings. The one element of a timetable for planning and development of "work in Space Biology" is a secure matter in the USSR and probably will not be revealed under these circumstances. Volume I, Part II (Outer Space from a Physical and Biological Point of View) includes study areas wherein the United States clearly has greater strength than the USSR. This is particularly evident in Chapters 1-3. Chapters 4-6 are areas where hard information has fully demonstrated little if any Soviet capability. Revelation of this information would be a gift to the USSR with no chance of Soviet factual return and little control over whether the Soviets would use the procedures properly to ensure a planetary sterile preserve.

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**SUBJECT: US-USSR Cooperation in Space Biology  
and Medicine**

Volume II, Part III (Medical and Biological Problems of Man's Flight into Space) represents a combination of secure Soviet information (Chapter 1, specific aspects of Chapters 2, 4, and 5), little data due to limited earth-bound experimental conditions (Chapter 3), and a current U.S. state-of-the-art and technological advantage (Chapter 6).

Volume III, Part IV (Systems for Protecting and Supporting Man in Space Flight) includes one area (Chapter 1) which would be advantageous to the United States should the Soviets choose to reveal details of their Vostok environmental control system (suit and capsule). Intelligence information now indicates that the manned Vostok program is in its final phase and that the major Soviet bioastronautics effort has been concentrated on prolonged (over 14 days) manned flight for about two years. Specific design and operating details of the Vostok life support system may well be outdated by the time these publications are published. In addition, a commitment has now been made by the Soviets to reveal and display the Vostok system to U.S. sources. The subjects of Chapters 2 and 3 represent a dilemma to both participants in that they are major requirements for prolonged flights and their development is at an early stage. The Soviet data in support of Chapter 4 already have been revealed in considerable depth via open literature.

### 3. Cooperative Research and Development

Our information continues to demonstrate that the Soviets are not interested in cooperation within areas where they have strong capabilities due to greater effort or unique space flight experience. They will not cooperate on development of environmental control systems for prolonged flight since they would have to reveal, among other things, the size of their proposed larger vehicle, how they achieve a tighter capsule than the United States has, what their basis for closed ecological systems is to be, etc. They will not offer to cooperate on the extremely critical factor of cardiovascular deconditioning since they would have to reveal their extensive and at times unique approach to care and

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**SUBJECT: US-USSR Cooperation in Space Biology  
and Medicine**

monitoring of the cosmonaut for periods over 14 days, the accelerative and decelerative forces expected from new generation vehicles, specific design of artificial gravity systems now under development, etc. They will not cooperate on development of suiting without umbilical cord requirements since this is an unsolved problem for the Soviets and the United States, and any advances would reflect on Soviet capabilities to accomplish rendezvous and docking their planned MOL and manned lunar landing operations.

Areas which they intend to offer for cooperative research and development include exobiology and sterilization of spacecraft, psychophysiology of space flight, study of vestibular problems of man in space flight, and problems of demineralization. The aforementioned are areas where Soviet knowledge and technology has faltered.

#### 4. Conclusions and Recommendations

a. For the initial cooperative stage (publication) the Soviets must be closely monitored as to detail and quality of content equal to the U.S. effort. The recent emergence of key investigators and responsible authorities in space biomedicine should be used to certify that proper authorities rather than spokesmen or scientific-political personalities write and edit the separate Soviet contributions.

b. Revelation of U.S. know-how in a number of areas will be manifestly one-sided. This may be turned to advantage by making conditions for Soviet revelation of details in areas where they excel (e.g., environmental control systems).

c. Cooperative research and development should be curtailed to include a few areas where there are opportunities for trade-off. Present indications limit cooperative effort for the next two to three years to cardiovascular problems and new devices for physiological monitoring of space crews.

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**SUBJECT: US-USSR Cooperation in Space Biology  
and Medicine**


d. All information exchanges should be made only after certification that the Soviet work, in fact, supplements available open sources of Soviet literature, such as the comprehensive Volumes I, II, and III of Problems of Space Biology.

25X1A

  
Deputy Chief  
Life Sciences Division/SI

**Distribution:**

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✓ - LSD/SI

OSI/LSD:  :irj/7513 (29 Jun 64)

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Approved For Release 2001/08/28 : CIA-RDP67B00558R000100100008-1

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26 JUN 1964

MEMORANDUM FOR: Chief, Action Staff/DDS&T

ATTENTION:

25X1A

SUBJECT: Cooperation with the USSR in Space Matters

1. Attached is a Staff Study on the Proposed US-Soviet Bilateral Agreement on Outer Space: Section Relating to Meteorological Satellites and Geomagnetic Survey.

2. The study is based on talks with U.S. participants in the recent bilateral discussions in Geneva and on our intelligence coverage of Soviet scientific and space programs. The conclusion is drawn that no objection should be interposed in the bilateral agreements on meteorological satellite and magnetic survey programs.

[Redacted Signature]

25X1A

Chief

General Sciences Division, SI

CONCURRENCE:

[Redacted Signature]

25X1A

29 JUN 1964

Assistant Director, SI

Date

Attachment:

Staff Study on the Proposed US-Soviet  
Bilateral Agreement on Outer Space

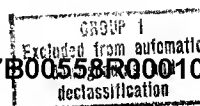
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26 June 1964

STAFF STUDY ON THE PROPOSED US-SOVIET BILATERAL  
AGREEMENT ON OUTER SPACE: SECTIONS RELATING TO  
METEOROLOGICAL SATELLITES AND GEOMAGNETIC SURVEY

Background

On 7 March 1962, President Kennedy addressed a letter to Premier Khrushchev proposing joint efforts in space research. Among the proposals was the joint establishment of an "early operational weather satellite system" designed to provide global weather data for prompt use by any nation, also a cooperative effort in conducting a magnetic survey of the earth.

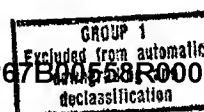
On 19 March 1962, the United States placed President Kennedy's proposals for US-Soviet cooperation in space research before the United Nations and publicly invited suggestions and a response from the USSR.

Following informal talks in New York between representatives of the two countries and an exchange of correspondence between the heads of two nations, a series of meetings to explore possible areas of space cooperation was held in May and June 1962 in Geneva between Dr. Hugh L. Dryden and Academician A. A. Blagonravov. The meetings resulted in a tentative agreement concerning three projects in which the two countries could cooperate: (i) the exchange of weather data from satellites and the eventual coordination of the launching of meteorological satellites; (ii) a joint effort to map the magnetic field of the earth by means of coordinated launchings of scientific satellites and related ground observations; and (iii) cooperation in the experimental relay of communications via the Echo satellite. Those technical recommendations were submitted to the two governments for final approval.

The United States and the Soviet Union on 5 December 1962 announced their formal agreement to ratify and execute the cooperative space efforts outlined in the Dryden-Blagonravov agreement of June 1962.

Recommendations outlining procedures for implementing the bilateral agreement were formulated in Rome in March 1963. In July and August 1963, an exchange of letters between Drs. Dryden and Blagonravov formally brought into effect the first Memorandum of Understanding to Implement the Bilateral Space Agreement.

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25 June 1964

On 6 June 1964 a Second Memorandum of Understanding to Implement the Bilateral Space Agreement of 8 June 1962 was signed in Geneva, Switzerland by Drs. Dryden and Blagonravov. Purposes of this latest Memorandum of Understanding, as announced, were (i) to advance the implementation of the coordinated meteorological satellite and world magnetic survey programs; and (ii) to provide for new cooperation in the preparation of a major review and projection of the work of the two countries in space biology and medicine.

The Coordinated Meteorological Satellite Program

Comments.--The latest Memorandum of Understanding provides for an exchange of conventional and satellite meteorological data. A separate protocol will provide for a communications link between Washington and Moscow to exchange the data. No specific schedule of meteorological satellite launchings is provided. The program is recognized as experimental and will be reviewed periodically beginning in 1965 at six month periods. If data is not mutually useful or available the exchange over the present link will be discontinued.

On first consideration, it might appear that the United States, because of its greater experience in the launching and use of meteorological satellites, stands to lose more than it will gain in its agreement with the Soviet Union for a coordinated meteorological satellite program. However, the program should be examined in the light of other related U.S. programs and policies before drawing such a conclusion. Actually, under the U.S. announced and implemented policy of making its weather satellite data freely available to the world, the USSR and other countries are already receiving the U.S. data regularly and routinely over the international meteorological communications network (sponsored by the World Meteorological Organization of the United Nations.)

The international exchange of meteorological data has been going on for years and the results of the U.S. weather satellite observations in the form of nephanalyses (cloud analyses) have been added to the conventional surface and upper air weather reports. (Even the Communist Chinese participate in the international exchange of weather data.) Thus the U.S. weather satellite results are transmitted and available to the Communist countries in digital form and by facsimile. The Soviets are using the U.S. data for operational and research purposes. They have published at least two books and several articles in the scientific literature based on Tiros data.

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26 June 1964

The only S&I advantage that the Soviets could obtain from the cooperative meteorological satellite program, therefore, is that they would probably obtain the U.S. data slightly quicker and in somewhat greater detail over the Washington-Moscow communications link. This improved data exchange is not considered especially significant because the present exchange is adequate for most purposes.

On the other hand, the proposed cooperation will make it possible for the United States to monitor the progress of the Soviet meteorological satellite program and to receive Soviet data which might not otherwise be available. When both countries have fully developed their weather satellite programs, it is likely that they will be independent of each other, but they could be used to complement each other.

At present and for the next few years it appears that the main advantage to the United States of the cooperative meteorological satellite program with the Soviets is the political and propaganda value. The bilateral agreement and particularly the policy of sharing with all other countries the results of our weather satellite observations demonstrates U.S. willingness to share the rewards of its space program with other countries. This U.S. policy has been very effective in building up U.S. prestige in the space area because its practical benefits are easily recognizable.

A possible benefit from the cooperative program is that the United States may learn more about Soviet space systems.

The possibility that the Soviets will obtain reconnaissance data under the guise of a meteorological satellite is somewhat remote because the orbit of a weather satellite is probably too high for effective reconnaissance. At any rate, this hazard does not seem to be any greater with an agreement than without one.

Recommendation.--No opposition to the weather satellite proposal is recommended.

#### The Cooperative Magnetic Field Survey

Comments.--Although this was first visualized as an exchange of magnetic data obtained by means of satellites supplemented by surface data from regular magnetic surveys and observatories, the latest Memorandum of Understanding contains no provision for exchange of satellite magnetic data. A vague provision calls for a review of the possibility of exchanging magnetic maps based on satellite measurements.

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26 June 1964

According to a U.S. participant in the negotiations leading to this agreement, the Soviets are afraid that their magnetic measurements obtained by means of satellites can be used by the United States for military purposes, therefore they have insisted on deleting any provisions for the exchange of such data. The U.S. participant is continuing to try to convince the Soviets that the data cannot be used for such purposes but is only valuable for scientific research. The fact that the U.S. Navy has some classified programs involving the acquisition of magnetic data is probably known to the Soviets.

The Soviets have released some magnetic data obtained by their nonmagnetic ship Zarya and some data obtained at the Soviet Antarctic stations, but they are reluctant to release magnetic data from the USSR.

U.S. magnetic data is probably of better quality than that of the USSR since Soviet magnetometer development lags that of the United States, however the Soviets are making progress in this area. The United States also has more useful satellite magnetic data than has the USSR. Cosmos 26 was the first Soviet satellite to carry a total field magnetometer whereas the U.S. first accomplished this with Vanguard III.

Under the World Magnetic Survey program, the United States regularly releases to all nations magnetic data obtained by satellites, observatories, and unclassified surveys; therefore the bilateral agreement to exchange data would provide little or no additional data to the Soviets. The exchange probably would make the U.S. data available to the Soviets somewhat earlier than at present, but this is not considered of great importance.

Under the Memorandum of Understanding, the United States would receive magnetic data from five Soviet observatories and some survey data taken without the use of satellites in exchange for similar U.S. data. This would result in the acquisition of some data not now available from the USSR, particularly that obtained during the period 1960 through 1963 (the period between the end of the IGY and the beginning of the IQSY).

The foregoing facts indicate that the United States stands to gain more Soviet magnetic data under the bilateral agreement than it would otherwise, whereas the USSR would not acquire any significant new magnetic data from the United States. The possibility remains that the Soviets will eventually agree to exchange satellite magnetic data.

Recommendation.--That no objection be made to the proposed magnetic data exchange.

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MEMORANDUM FOR: *Com - 2*

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to DD/S+FI 8-32-67*

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(DATE)

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1 AUG 54 WHICH MAY BE USED. (47)

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6/23/64	6/23/64				
<b>TO</b> <b>FROM</b> U. Alexis Johnson <b>SUBJ.</b> Cooperation with the USSR in Space Matters 1 copy w/ette rec'd				ROUTING	DATE SENT
COURIER NO.	ANSWERED	NO REPLY		6	

<b>TRANSMITTAL SLIP</b>		DATE
TO:		
ROOM NO.	BUILDING	
REMARKS:		
<p>Note, this is an advanced copy before receipt of the original which is awaiting [REDACTED] signature.</p> <p>25X1A</p>		
FROM:		
ROOM NO.	BUILDING	EXTENSION

FORM NO. 241  
1 FEB 55

REPLACES FORM 36-8  
WHICH MAY BE USED.

☆ GPO : 1957—O—439445

(47)

UNCLASSIFIED		CONFIDENTIAL		SECRET	
CENTRAL INTELLIGENCE AGENCY OFFICIAL ROUTING SLIP					
TO	25X1A NAME AND ADDRESS			DATE	INITIALS
1	[REDACTED]				lg
2					
3					
4					
5					
6					
ACTION		DIRECT REPLY		PREPARE REPLY	
APPROVAL		DISPATCH		RECOMMENDATION	
COMMENT		FILE		RETURN	
CONCURRENCE		INFORMATION		SIGNATURE	
Remarks:					
Bill:					
I see nothing wrong with the proposal. As a matter of fact, this kind of information is already being exchanged. The agreement, however, will not buy us anything unless it also involves visits to laboratories. You might want to check this out with Dr. [REDACTED] n OSI.					
[REDACTED]					
FOLD HERE TO RETURN TO SENDER					
FROM: NAME, ADDRESS AND PHONE NO.				DATE	
[REDACTED]				25 June	
UNCLASSIFIED		CONFIDENTIAL		SECRET	

25X1A

25X1A

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**CENTRAL INTELLIGENCE AGENCY  
OFFICIAL ROUTING SLIP**

TO	NAME AND ADDRESS	DATE	INITIALS
1	Chief, Action Staff/DDS&T		
2	Attn: [REDACTED] Room #3E30 Headquarters	6/29	Wg
3			
4			
5			
6			

<input type="checkbox"/> ACTION	<input type="checkbox"/> DIRECT REPLY	<input type="checkbox"/> PREPARE REPLY
<input type="checkbox"/> APPROVAL	<input type="checkbox"/> DISPATCH	<input type="checkbox"/> RECOMMENDATION
<input type="checkbox"/> COMMENT	<input type="checkbox"/> FILE	<input type="checkbox"/> RETURN
<input type="checkbox"/> CONCURRENCE	<input type="checkbox"/> INFORMATION	<input type="checkbox"/> SIGNATURE

Remarks:

<b>FOLD HERE TO RETURN TO SENDER</b>	
FROM: NAME, ADDRESS AND PHONE NO.	DATE

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